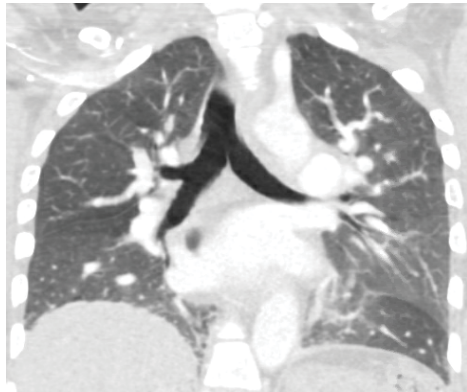


Clinical-Medical Image

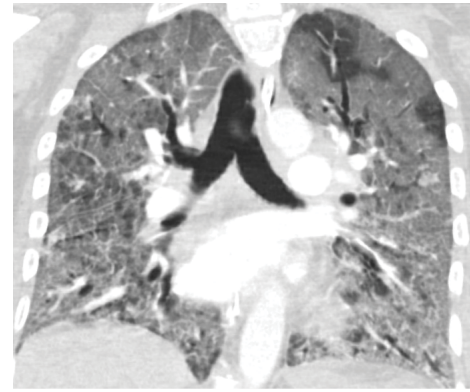
## Pulmonary Fibrosis in COVID-19

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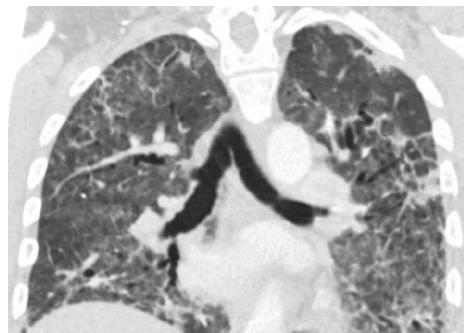
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**Figure 1:** Chest CT during a prior admission revealing mild pulmonary edema and scattered areas of ground-glass opacities at the lung bases concerning for a bacterial pneumonia.



**Figure 2:** Chest CT findings of ground-glass opacities with interlobular septal thickening involving the majority of the lung parenchyma (as well as diffuse traction bronchiectasis), consistent with acute lung injury during an active COVID-19 infection.



**Figure 3:** Chest CT findings following COVID-19 revealing extensive diffuse parenchymal abnormalities with pulmonary fibrosis, traction bronchiectasis and reticulation.

### Clinical Image

A 42-year-old woman with a history of sickle cell disease and hemolytic anemia was admitted for acute hypoxic respiratory failure due to coronavirus disease 2019 (COVID-19) requiring 16 days of invasive mechanical ventilation. She was paralyzed and prone on the ICU acute respiratory distress syndrome protocol and received plaquenil, doxycycline and tocilizumab for treatment of COVID-19 as well as broad-spectrum antibiotics for empiric treatment of a possible superimposed bacterial pneumonia. She was intubated for 2 weeks, respectively, and was discharged to an acute rehabilitation facility within 6 weeks of initial presentation. Follow-up chest imaging was performed 1 week after discharge. The figures below reveal the chest imaging findings of this patient from a prior admission for hypoxia secondary to acute chest syndrome (e.g. baseline chest CT, Figure 1), findings of acute lung injury during her active COVID-19 infection (Figure 2) and resulting pulmonary fibrosis and traction bronchiectasis following the resolution of her acute COVID-19 infection (Figure 3). While survival among admitted patients is 79%, many develop significant complications such as pulmonary fibrosis and bronchiectasis.

**Keywords:** COVID-19; Coronavirus; Pandemic; Pulmonary fibrosis

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